

Paired Tests of Hondas



Does a vehicle's test history matter to the current test?

- Abort before first test
- Previous failure
- Previous noted repair
- Previously Test Only facility
- Repeated facility
- Change of ownership

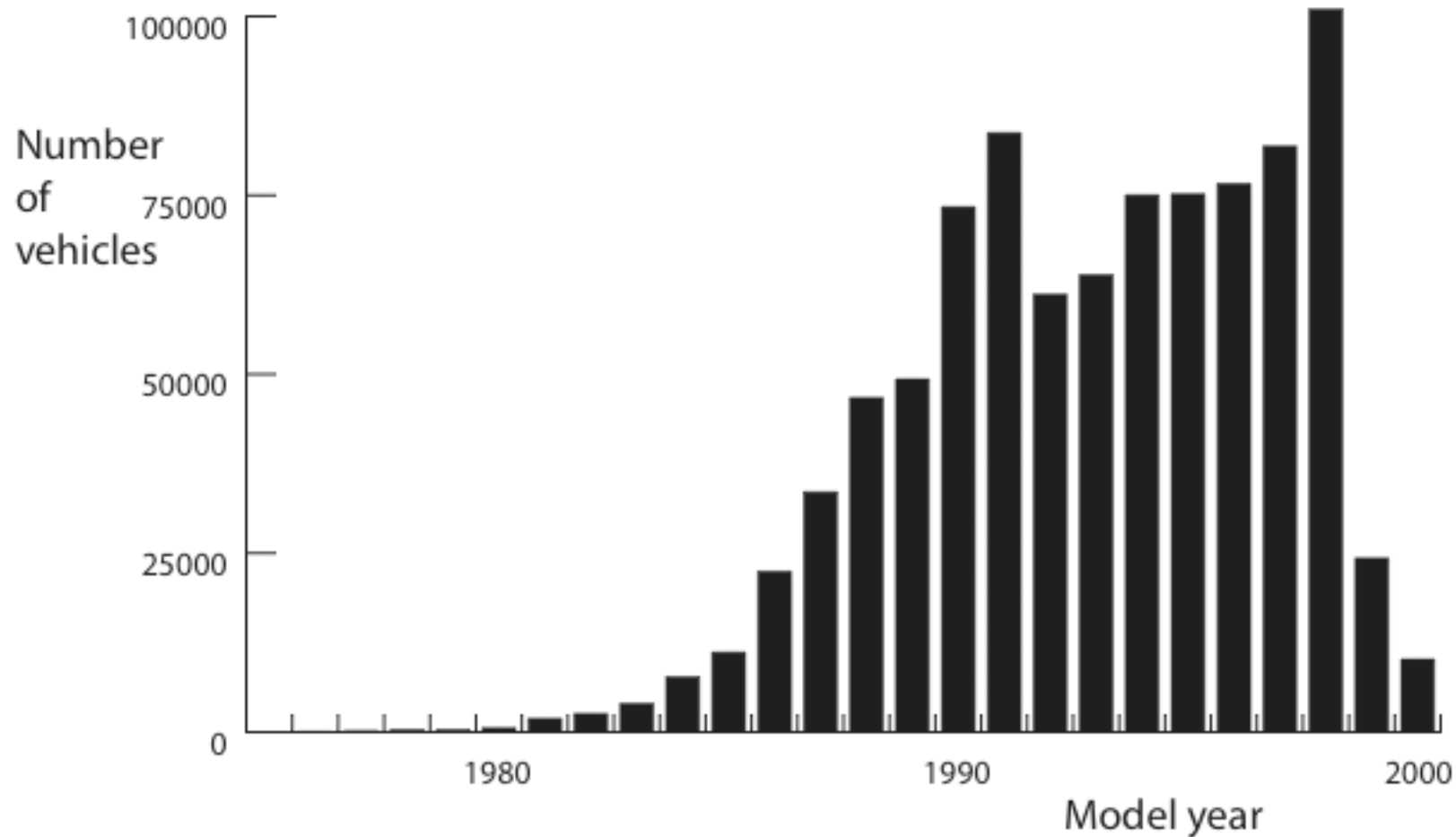


Hondas over 2000-2004

- 2,542,255 vehicles have Honda VINs
- 401,991 have but one test cycle
- 98,505 or more had no ASM test
- 35,541 had a gap in the history
- Some 20,000 likely further matches
- 907,032 used in analysis here



Hondas by Model Year

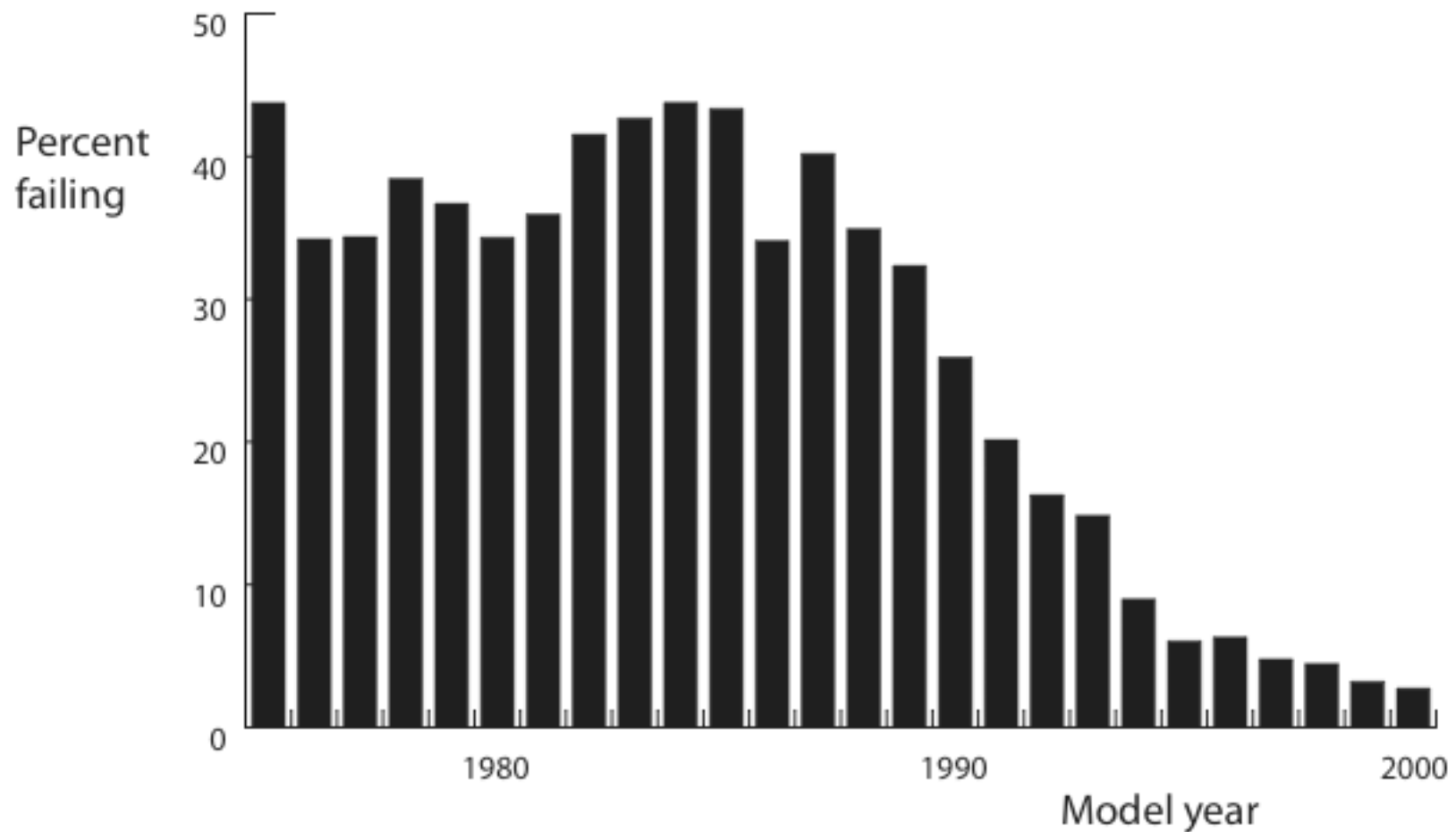


Characteristics of the 907,032 Hondas

- 131,130 mean mileage
- 3.5% have vanity plates
- 2.8% of these first tests were pre-tests
- 1.9% had repairs reported
- 4.1% had an aborted tests just before
- 16.15% failed the first test in 2003-04



Results of First Tests (2003–04) for Hondas

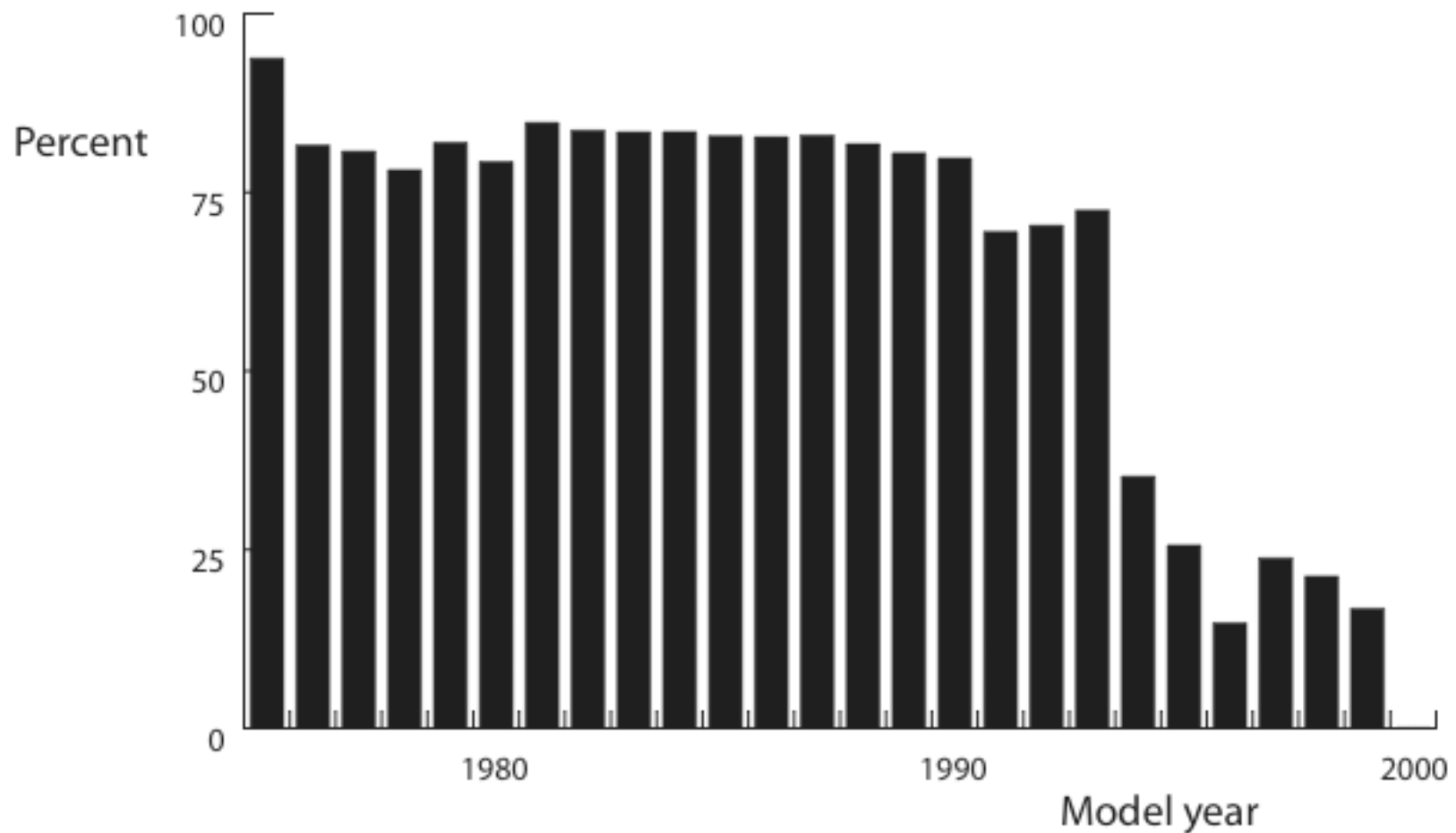


Characteristics of the 907,032 Hondas

- At Test Only facilities, 19.8% failed
- At Test & Repair facilities, 9.9% failed
- 63.2% tests were at Test Only facilities
- 50.3% were directed to Test Only



Hondas Directed (2003–04) to Test Only

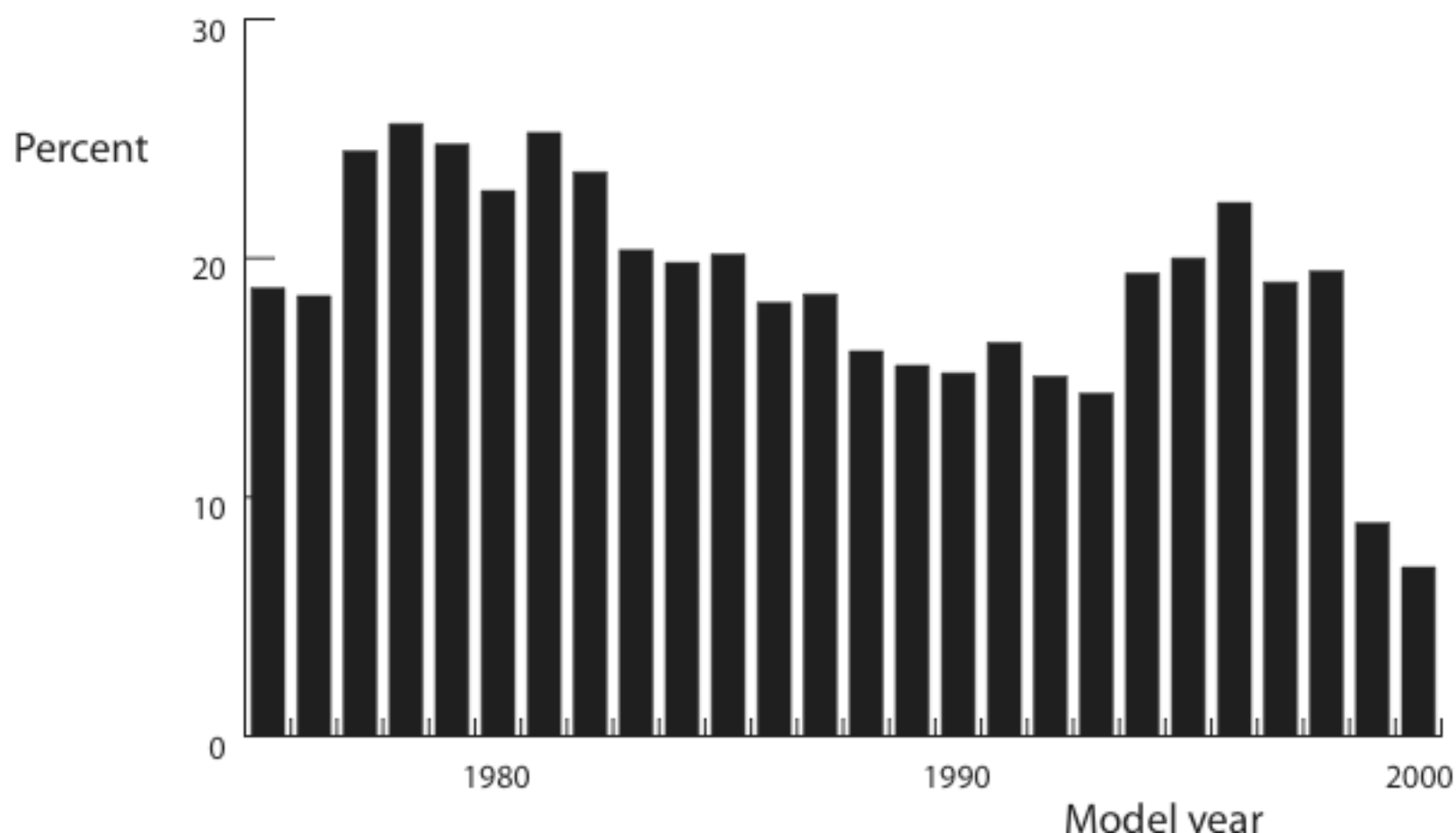


Characteristics of the 907,032 Hondas

- 29.2% had been to Test Only before
- 9.5% had failed before
- 6.7% reported repairs before
- 19.4% were BAR 90 tests before
- 35.0% of previous tests were initial or change-of-owner
- 17.6% tested at facility used before



Hondas (2003–04) Returning to Previous Testing Facility



Influences on probability of failing first test

Current features of vehicle

- +1.44% with 1 more year of age
- +1.00% with an additional 10,000 miles
- +0.24% with one more cylinder
- −0.45% with engine 100 cubic cm larger
- −0.93% with vanity plate



Influences on probability of failing first test

Features of current test cycle

- +4.56% if aborted test preceding
- +26.7% if a pre-test
- –10.5% if repairs already
- +0.35% if Test Only facility
- +2.63% if directed



Influences on probability of failing first test

Features since previous test cycle

- +0.05% if one more month since previous test cycle completed
- –0.07% if an additional 1,000 miles/year
- +4.31% if previous test was initial or change-of-owner



Influences on probability of failing first test

Features of previous test cycle

- +13.0% if previous cycle involved a failure
- +3.16% if previous cycle involved a repair
- +0.48% if previous cycle was BAR 90
- –0.39% if previous cycle involved a Test Only facility
- –1.41% if previous cycle involved the same facility as current test



Conclusions

- Individual vehicles' histories do matter, but not strongly, and do not reverse analysis.
- These measured characteristics do not explain pass/fail all that well.
- Controlling for characteristics reduces the difference between Test Only and Test & Repair.
- Drivers' choices, such as pre-tests or returning to a facility, matter on the scale of the difference between Test Only and Test & Repair.

